IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method for processing a digital audio signal, the method comprising the steps of:

providing a digital audio signal representing unimpaired audio information;

compressing and encrypting [[the]] said digital audio signal to produce a first compressed and encrypted audio signal, the audio information of which is substantially unimpaired compared to that of the said digital audio signal;

producing an unencrypted second audio signal; and

combining [[the]] said first and second audio signals to produce a combined signal comprising the compressed and encrypted first audio signal and the unencrypted second audio signal, wherein

said first audio signal occurs as noise in said combined signal; and

the step of combining the first and second signals comprises embedding the first signal as noise in the second signal.

Claim 2 (Previously Presented): The method according to claim 1 wherein the digital audio signal is losslessly compressed to produce the first audio signal.

Claims 3-4 (Canceled).

Claim 5 (Currently Amended): The method according to claim 1, wherein the step of combining comprises appending at least part of the first signal to the [[sad]] second signal.

Claim 6 (Previously Presented): The method according to claim 1, wherein the step of producing the second signal comprises impairing at least a portion of the digital signal.

Claim 7 (Previously Presented): The method according to claim 5, wherein the step of producing the second signal comprises combining the digital signal with a third signal which impairs at least a portion of the digital signal.

Claim 8 (Previously Presented): The method according to claim 5, further comprising the steps of:

modulating the third signal; and

combining the modulated third signal with the digital signal.

Claim 9 (Previously Presented): The method according to claim 1, wherein the step of producing the first signal comprises:

compressing the digital signal; and

encrypting the compressed signal without substantially increasing the number of bits of the compressed digital signal.

Claim 10 (Previously Presented): The method according to claim 1, wherein the second signal is a sampled digital signal, each sample having more significant bits (MSBs) and less significant bits (LSBs).

Claim 11 (Previously Presented): The method according to claim 10, wherein the digital signal has a fixed point format.

Claim 12 (Previously Presented): The method according to claim 10, wherein the first signal is combined with the second signal by replacing the LSBs of the second signal with at least some of the bits of the first signal.

Claim 13 (Previously Presented): The method according to claim 12, wherein a predetermined fixed number of LSBs of the second signal are replaced by at least some of the bits of the first signal.

Claim 14 (Currently Amended): The method according to claim 12, wherein, in the combined signal, [[the]] a ratio of MSBs, representing [[the]] said second signal, to LSBs, representing the bits of the first signal, is variable.

Claim 15 (Previously Presented): The method according to claim 14, wherein the ratio is dependent on compression applied to the first digital signal.

Claim 16 (Previously Presented): The method according to claim 12, wherein the combined signal includes data indicating which bits of the combined signal are LSBs and which bits are MSBs.

Claim 17 (Previously Presented): The method according to claim 10, further comprising the step of reducing an amount of data in the second signal.

Claim 18 (Previously Presented): The method according to claim 17, comprising the step of reducing a sampling rate of the second signal.

Claim 19 (Previously Presented): The method according to claim 10, further comprising providing a file containing the first signal and a file containing the second signal.

Claim 20 (Previously Presented): The method according to claim 19, wherein a ratio of MSBs, representing the said second signal, to LSBs, representing said first digital signal, is dependent on a number of bits in the files of the first signal and a number of bits of the second signal.

Claim 21 (Previously Presented): The method according to claim 19, wherein the bits of the first signal are distributed over samples of the second signal based on a ratio of the total number of encrypted bits in the encrypted signal file to the total number of samples of the second signal.

Claim 22 (Currently Amended): The method according to claim 21, wherein the ratio is approximated by an integer fraction M/N, and further comprising the steps of:

selecting groups of N samples; and

distributing, over the N samples of each group, corresponding sets of M bits.

Claim 23 (Previously Presented): The method according to claim 22, further comprising the steps of:

scaling a value A of each of the N samples according to $A'[X]=(A [X]/S)*S$ where: X is an ordinal numbering of the samples and equals 0 to N-1; and $S=2^R$ where R is M/N; and

replacing $A'[X]$ by $A''[X]=A'[X]+V/S^X$ for X>0, and

by $A''[0]=A'[0]+\bmod S$ for X=0,

where for each of X=N-1 to 0, V is replaced by $V-V/S^X$, V initially being the value of the M bits when X=N-1.

Claim 24 (Previously Presented): The method according to claim 1, wherein the second signal is a sampled digital signal, each sample having most significant bits (MSBs) and less significant bits (LSBs), and comprising the step of dividing the second signal into blocks each block comprising a plurality of samples.

Claim 25 (Previously Presented): The method according to claim 24, wherein each block of the second signal contains the same predetermined number of samples.

Claim 26 (Previously Presented): The method according to claim 24, further comprising the steps of:

analysing the signal level of the second signal; and

setting the number of samples per block based on signal level.

Claim 27 (Previously Presented): The method according to claim 24, wherein the number of samples per block in the second signal varies.

Claim 28 (Previously Presented): The method according to claim 27, further comprising the steps of:

analysing the signal level of the said second signal; and

setting the number of samples in a block based on a function of the levels of the signal samples within the block.

Claim 29 (Previously Presented): The method according to claim 24, further comprising providing, in the second signal, data indicating the boundaries of the blocks.

Claim 30 (Currently Amended): The method according to claim 29, wherein, in each block, the first signal is combined with the second signal by replacing the LSBs of the second signal with bits of the first signal and [[the]] a ratio of MSBs, representing [[the]] said second signal, to LSBs, representing the bits of the first signal, in each block is a function of the signal levels of the samples of the second signal in the block.

Claim 31 (Previously Presented): The method according to claim 30, wherein the data indicating the block boundaries includes data indicating the number of samples in each block.

Claim 32 (Currently Amended): The method according to claim 1, wherein the step of producing the first signal further comprises the steps of: [[\]]

compressing and encrypting the digital audio signal, and [[\]]

wherein at least the step of encrypting comprises:

selecting sections of the compressed digital audio signal;

separately encrypting each section; and

providing data in the first signal indicating the section boundaries.

Claim 33 (Previously Presented): The method according to claim 32, further comprising providing a file containing the digital audio signal to be compressed and encrypted.

Claim 34 (Currently Amended): The method according to claim 33, further comprising the steps of:

compressing ~~the whole~~ an entirety of the file; and

encrypting [[the]] sections of the compressed file.

Claim 35 (Currently Amended): The method according to claim 33, further comprising the steps of:

selecting sections of the file;

separately compressing and encrypting each sections; and

providing each section with data at least identifying the section.

Claim 36 (Previously Presented): The method according to claim 32, further comprising the steps of:

encrypting at least one section according to one encryption key;

encrypting at least one other section according to another key; and

storing data indicating the correspondence between the sections and the keys.

Claim 37 (Previously Presented): The method according to claim 36, wherein the correspondence data is stored in the first digital signal.

Claim 38 (Previously Presented): The method according to 32, wherein the data indicating the section boundaries identifies the data included in the sections.

Claim 39 (Previously Presented): The method according to claim 1, further comprising the step of compressing at least part of the second signal and wherein the combining step comprises combining the first signal with the compressed second signal.

Claim 40 (Previously Presented): The method according to claim 39, wherein the compressed second signal comprises auxiliary data space within the data structure thereof, and comprising the step of placing at least some of the bits of the first digital signal in the said auxiliary data space of the compressed second signal.

Claim 41 (Previously Presented): The method according to claim 39, wherein the second signal is compressed according to an MPEG standard.

Claim 42 (Previously Presented): The method according to claim 10, wherein the step of producing the first digital signal comprises:

receiving the digital signal from a streaming source;

dividing the digital stream into segments each comprising a predetermined number of samples; and

separately compressing and encrypting each segment.

Claim 43 (Previously Presented): The method according to claim 42, further comprising:

encrypting all sections according to the same key or encrypting at least one section according to one encryption key, and at least one other section is encrypted according to another key; and

storing data indicating the correspondence between the sections and the keys.

Claim 44 (Previously Presented): The method according to claim 43, wherein the correspondence data is stored in the first digital signal.

Claim 45 (Previously Presented): The method according to claim 42, wherein the first signal is combined with the second signal by replacing, in samples of the second signal, the LSBs of the second signal with the bits of the first signal.

Claim 46 (Previously Presented): The method according to claim 45, wherein a predetermined fixed number of LSBs of a sample of the second signal are replaced by the bits of the first signal.

Claim 47 (Previously Presented): The method according to claim 46, wherein, in samples of the combined signal, the ratio of MSBs, representing the second signal, to LSBs, representing the bits of the first signal, is variable.

Claim 48 (Previously Presented): The method according to claim 47, wherein the ratio is dependent on an amount of compression applied to the first signal.

Claim 49 (Previously Presented): The method according to claim 45, wherein the combined signal includes data indicating which bits of the combined signal are LSBs and which bits are MSBs.

Claim 50 (Previously Presented): The method according to claim 45, further comprising appending at least part of the first digital signal to the second signal.

Claim 51 (Previously Presented): The method according to claim 42, further comprising the steps of:

selecting groups of N samples; and

distributing over the N samples of each group corresponding sets of M bits of the first signal,

where the ratio M/N is an integer fraction.

Claim 52 (Previously Presented): The method according to claim 51, further comprising the steps of:

scaling a value A of each of the N samples according to $A'[X]=(A\ [X]/S)*S$ where: X is an ordinal numbering of the samples and equals 0 to N-1; and $S=2^R$ where R is M/N; and

replacing $A'[X]$ by $A''[X]=A'[X]+V/S^X$ for X>0, and

by $A''[0]=A'[0]+\text{mod } S$ for X=0,

where for each of X=N-1 to 0, V is replaced by $V-V/S^X$, V initially being the value of the M bits when X=N-1.

Claim 53 (Previously Presented): The method according to claim 1, further comprising the step of recording the combined signal on a recording medium.

Claim 54 (Previously Presented): The method according to claim 1, further comprising providing the combined signal to a signal distribution system.

Claim 55 (Previously Presented): The method according to claim 1, further comprising providing the combined signal to a transmission system.

Claim 56 (Currently Amended): A ~~recording medium including instructions that~~ ~~computer program which~~ when run on a ~~suitable~~ data processor causes [[a]] the data processor to implement the method of claim 1.

Claim 57 (Currently Amended): A ~~storage~~ recording medium ~~storing a program~~ according to claim 56, wherein the recording medium includes one of a tape and a disc.

Claim 58 (Currently Amended): An apparatus ~~arranged~~ comprising a processor programmed to execute the method of claim 1.

Claim 59 (Currently Amended): An apparatus for processing a digital signal, the apparatus comprising:

a first input for receiving a digital audio signal representing complete and unimpaired audio information;

a compressor and encryptor arranged to compress and encrypt the digital audio signal arranged to produce a compressed and encrypted first audio signal, the audio information of which is substantially unimpaired compared to that of the digital audio signal;

a second input for receiving an unencrypted second audio signal; and

a signal combiner arranged to combine the first and the second audio signals to produce a combined signal comprising the compressed and encrypted audio signal and the unencrypted second signal, wherein:

the first audio signal occurs as noise in the combined signal, and

the signal combiner is operable to embed the first signal as noise in the second signal.

Claim 60 (Previously Presented): The apparatus according to claim 59, further comprising a first signal producer operable to produce the digital audio signal representing unimpaired audio information.

Claim 61 (Previously Presented): The apparatus according to claim 59, further comprising a second signal producer operable to produce the unencrypted second audio signal.

Claim 62 (Previously Presented): The apparatus according to claim 61, wherein the second signal producer further comprises a signal impairing for impairing the digital audio signal to produce said second signal.

Claim 63 (Previously Presented): The apparatus according to claim 62, wherein the second signal producer comprises a second combiner for combining the digital audio signal with a degradation signal that degrades the digital audio signal to produce the second signal.

Claim 64 (Currently Amended): The apparatus according to claim 63, further comprising:

a modulator for modulating the degradation signal, and

wherein the second combiner is arranged to combine the modulated degradation signal with the digital audio signal to produce the second signal.

Claim 65 (Previously Presented): The apparatus according to claim 64, wherein the second signal is a sampled digital signal, each sample having most significant bits (MBSs) and less significant bits (LSBs) and wherein the signal combiner is operable to combine the

first signal with the second signal by replacing the LSBs of the second signal with bits of the

first signal.

Claim 66 (Previously Presented): The apparatus according to claim 65, wherein the

signal combiner is arranged to control a ratio of the number of LSBs to MSBs according to

the compression ratio achieved by the compressor.

Claim 67 (Previously Presented): The apparatus according to claim 65, wherein the

signal combiner is adapted to append at least part of the first digital signal to the second

signal.

Claim 68 (Previously Presented): The apparatus according to claim 59, wherein the

signal combiner is arranged to distribute the bits of the first signal over samples of the second

signal based on a ratio of the total number of encrypted bits in the encrypted first audio signal

to the total number of samples of the second signal.

Claim 69 (Previously Presented): The apparatus according to claim 68, wherein the

ratio is approximated by an integer fraction M/N where M/N is less than the ratio, and further

comprising the step of:

selecting groups of N samples and distributing over the N samples of each group

corresponding sets of M bits.

Claim 70 (Previously Presented): The apparatus according to claim 69, wherein the

signal combiner is arranged to implement the steps of:

scaling a value A of each of the N samples according to $A'[X]=(A[X]/S)*S$ where: X is an ordinal numbering of the samples and equals 0 to N-1; and $S=2^R$ where R is M/N; and

replacing $A'[X]$ by $A''[X]=A'[X]+V/S^X$ for X>0, and

by $A''[0]=A'[0]+\text{mod } S$ for X=0,

where for each of X=N-1 to 0, V is replaced by $V-V/S^X$, V initially being the value of the M bits when X=N-1.

Claim 71 (Previously Presented): The apparatus according to claim 59, further comprising a second compressor operable to compress the second signal, the signal combiner being arranged to combine the first signal with the compressed second signal.

Claim 72 (Previously Presented): The apparatus according to claim 71, wherein the compression ratio of the second compressor is dependent on the compression ratio achieved by the compressor.

Claim 73 (Previously Presented): The apparatus according to claim 59, wherein the compressor and encryptor are arranged to produce a losslessly compressed and encrypted first audio signal.

Claim 74 (Currently Amended): A recording medium comprising:

a medium configured to store computer readable instructions and data thereon, said data being stored in said medium according to a predetermined data structure that includes data structure, that is machine-interpretable, comprising:

a combination of a compressed and subsequently encrypted first digital audio signal, the audio information of which is substantially unimpaired; and

an unencrypted second digital audio signal, wherein:

the first digital audio signal occurs as noise in the combination, and

the first audio signal is embedded as noise in the second digital audio signal.

Claim 75 (Currently Amended): The ~~data structure~~ recording medium according to claim 74, wherein the first digital audio signal is embedded in the second digital audio signal.

Claim 76 (Currently Amended): The ~~data structure~~ recording medium according to claim 74, in which MSBs of a combined signal represent the second digital audio signal and LSBs represent the first digital audio signal.

Claim 77 (Currently Amended): The ~~data structure~~ recording medium according to claim 76, further comprising data indicating a boundary between the LSBs and the MSBs.

Claim 78 (Currently Amended): The ~~data structure~~ recording medium according to claim 76, wherein a ratio of LSBs to MSBs per sample varies.

Claim 79 (Currently Amended): The ~~data structure~~ recording medium according to claim 74, wherein the second signal is compressed according to a data format having auxiliary data space, and the first digital signal is in the auxiliary data space.

Claim 80 (Currently Amended): The ~~data structure~~ recording medium according to claim 74, wherein at least part of the first digital signal is appended to the second signal.

Claim 81 (Currently Amended): The ~~data structure~~ recording medium according to claim 74, wherein the data is arranged in blocks each block comprising a plurality of samples, the data structure including data indicating a number of samples in the blocks.

Claim 82 (Currently Amended): The ~~data structure~~ recording medium according to claim 74, further comprising data identifying at least one encryption key used to encrypt the first digital audio signal.

Claim 83 (Currently Amended): The ~~data structure~~ recording medium according to claim 81, wherein the blocks comprise groups of N samples and sets of M bits of the first signal are distributed over the N samples of each group where the ratio M/N is an integer fraction.

Claim 84 (Currently Amended): The ~~data structure~~ recording medium according to claim 83, comprising data indicating the blocks.

Claim 85 (Currently Amended): The ~~data structure~~ recording medium according to claim 74, wherein the second digital audio signal is an impaired version of the audio signal represented by the digital signal.

Claim 86 (Currently Amended): A method of recovering a first signal from a combination of a first, compressed and encrypted, digital audio signal combined with a second signal, in which

the audio information of the first audio signal ~~being~~ is substantially unimpaired[[,]];

17

the first audio signal occurs as noise when combined as a combination with the

second signal;

the first audio signal is embedded as noise in the second signal; and

the method ~~comprising~~ comprises the steps of:

separating the first audio signal from the combination;

decrypting the separated first signal; and

decompressing the decrypted first signal to recover the substantially unimpaired audio

information ~~thereof~~.

Claim 87 (Previously Presented): The method according to claim 86, wherein the first

signal is represented by Less Significant Bits (LSBs) of the combined signal and the second

signal is represented by Most Significant Bits (MSBs) of the combined signal and further

comprising the step of discarding the MSBs to separate the first signal from the second

signal.

Claim 88 (Previously Presented): The method according to claim 87, wherein the first

signal is appended to the second signal and further comprising the step of discarding the

second signal.

Claim 89 (Previously Presented): The method according to claim 86, wherein the

second signal is a compressed signal, compressed according to a format which has auxiliary

data space in which the first signal is placed, and further comprising the step of extracting the

first signal from the auxiliary data space.

Claim 90 (Previously Presented): The method according to claim 86, wherein the first and second signals are combined, wherein the recovering method comprises, for each group of N samples, the steps of setting X=0, setting V=0, and replacing V by V=V+A'[X] modS*S^X for each of X=0 to N-1.

Claim 91 (Currently Amended): An apparatus for recovering a digital signal, the digital signal being compressed and encrypted and combined <u>as a combination</u> with a second signal,

<u>in which</u>

<u>the digital signal occurs as noise in the combination;</u>

<u>the digital signal is embedded as noise in the second signal; and</u>

the apparatus ~~comprising~~ <u>comprises:</u>

a separator for separating the compressed and encrypted signal from the second signal;

a decryptor for decrypting the separated signal; and

a decompressor for decompressing the decrypted signal.

Claim 92 (Currently Amended): A ~~program which~~ <u>recording medium including instructions that</u> when run on a ~~suitable~~ data processor implements the method of claim 86.

Claim 93 (Currently Amended): A ~~storage~~ <u>recording</u> medium ~~storing a program~~ according to claim 92<u>, wherein the recording medium includes one of a tape and a disc</u>.

Claim 94 (Currently Amended): A processing apparatus <u>comprising a processor programmed</u> ~~adapted~~ to implement the method of claim 86.

Claim 95 (Previously Presented): A system comprising at least first and second processors, the system being adapted to execute a method of transferring a digital signal representing content from the first processor to the second processor, the method comprising the steps of:

using the first processor to implement the method of claim 1 to produce the combined signal and to associate an identifier with the combined signal for identifying the combined signal;

storing the identifier;

transferring the combined signal to the second processor;

at the second processor, deriving the identifier associated with the combined signal;

transferring to the second processor, at least one key associated with the said identifier, based on one or more predetermined conditions for decrypting the encrypted first signal; and

utilizing the second processor to separate the first signal from the second signal and to restore the first signal.

Claim 96 (Previously Presented): A system comprising a transaction server and at least first and second clients, the system being adapted to execute a method of transferring a digital signal representing content from the first client to the second client, the method comprising the steps of:

using the first client to implement the method of claim 1 to produce the combined signal and associating an identifier with the combined signal for identifying the combined signal;

providing, to the transaction server, the identifier and at least one key for decrypting

the encrypted signal and storing, in the transaction server, the identifier and the at least one

key;

transferring the combined signal to the second client;

deriving the identifier associated with the combined signal;

transferring the identifier from the second client to the transaction server;

transferring from the transaction server to the second client at least one key associated

with the said identifier, based on one or more predetermined conditions, for decrypting the

encrypted first signal; and

using the second client to separate the first signal from the second signal, and using

the decryption key decrypt the first signal, decompress the decrypted to restore the digital

signal.

Claim 97 (Previously Presented): A method of processing a digital signal comprising

the steps of:

providing a first digital signal representing first information;

providing a second digital signal; and

embedding the first signal in the second signal by replacing Less Significant Bits

(LSBs) of the second signal by bits of the first signal and retaining More Significant Bits

(MSBs) of the second signal,

whereby the first signal occurs as noise in the second signal.

Claim 98 (Previously Presented): A method of processing a digital signal comprising

the steps of:

providing a first digital signal representing first information;

providing a second digital signal; and

embedding the first signal in the second signal by selecting groups of N samples and distributing over the N samples of each group corresponding sets of M samples of the first signal, where the ratio M/N is an integer fraction.

Claim 99 (Previously Presented): The method according to claim 98, further comprising the steps of:

scaling a value A of each of the N samples according to $A'[X]=(A [X]/S)* S$ where: X is an ordinal numbering of the samples and equals 0 to N-1; and $S=2^R$ where R is M/N; and

replacing $A'[X]$ by $A''[X]=A'[X]+V/S^X$ for X>0, and

by $A''[0]=A'[0]+mod S$ for X=0,

where for each of X=N-1 to 0, V is replaced by $V-V/S^X$, V initially being the value of the M bits when X=N-1.

Claim 100 (Previously Presented): The method according to claim 97, wherein the first signal is a compressed signal.

Claim 101 (Previously Presented): The method according to claim 97, wherein the first signal is an encrypted signal.

Claim 102 (Previously Presented): A method of processing a digital signal comprising the steps of:

providing a first digital signal representing substantially unimpaired first information, the first signal being a compressed and/or encrypted signals;

providing an unencrypted second digital signal representing second information, and

which is compressed according to a compression format having auxiliary data space;

combining the first signal comprising the substantially unimpaired first information

with the second signal; and

embedding at least part of the first signal being embedded in the auxiliary data space

of the second signal.

Claim 103 (Previously Presented): The method according to claim 102, wherein part

of the first signal is appended to the second signal.

Claim 104 (Currently Amended): The ~~method~~ system according to claim 95, wherein

the first signal ~~represents~~ includes computer ~~program code~~ readable instructions.

Claim 105 (Previously Presented): The method according to claim 95, wherein the

second signal is an audio signal.

Claim 106 (Currently Amended): An apparatus comprising a processor programmed

~~adapted~~ to execute the method of claim 95.

Claim 107 (Currently Amended): A computer ~~program which,~~ readable medium

having recorded thereon instructions that when run on a ~~suitable~~ computer or computer

system, implements the method of claim 95.

Claim 108 (Currently Amended): A ~~recording~~ <u>computer readable</u> medium ~~on which~~ ~~the computer program of~~ <u>according to</u> claim 107 ~~is recorded~~ <u>comprising at least one of a tape and a disc</u>.

Claims 109-110 (Canceled).